

In the Claims:

Claims 1-14 (canceled)

15. (previously presented) The optoelectronic transceiver of claim 18, further comprising an optical radiation shaping element disposed between said thin membrane and said radiation- emitting region of said optoelectronic transmitting unit.

16. (previously presented) The optoelectronic transceiver of claim 15, wherein said optical radiation shaping element comprises a lens with a focusing action.

17. (previously presented) The optoelectronic transceiver of claim 15, wherein said optical radiation shaping element comprises an optical gel.

18. (previously presented) An optoelectronic transceiver, comprising:
a substrate element comprising a first electrical conductor track and a second electrical conductor track;
an optoelectronic transmitting unit disposed on a portion of said substrate element and electrically connected to said first electrical conductor track, said optoelectronic transmitting unit comprising:

a radiation-emitting layer region; and

an optoelectronic receiving unit electrically connected to said second electrical conductor track and is disposed in bridge-like fashion above said optoelectronic transmitting unit along a common optical axis via a spacer attached to said substrate so that said optoelectronic receiving unit is spaced from said substrate, said optoelectronic receiving unit comprising:

an active radiation-sensitive layer region disposed perpendicular to said optical axis and located in a thin membrane, which is disposed immediately in front of said radiation-emitting layer region of said optoelectronic transmitting unit.

19. (previously presented) The optoelectronic transceiver of claim 18, wherein said active radiation-emitting layer region of said optoelectronic transmitting unit is disposed perpendicular to said optical axis.

20. (previously presented) The optoelectronic transceiver of claim 18, wherein said substrate element has a recess, and said radiation-emitting region of said optoelectronic transmitting unit and at least a portion of said active layer region of said optoelectronic receiving unit are disposed in the region of said recess, and said optoelectronic transmitting unit and said optoelectronic receiving unit are disposed on

two different sides of said substrate element.

21. (previously presented) The optoelectronic transceiver of claim 18, wherein contacting of said receiving unit, disposed above said optoelectronic transmitting unit, is effected by contacting elements which are disposed on side faces of said optoelectronic transmitting unit.

Claims 22-23 (canceled)

24. (previously presented) The optoelectronic transceiver of claim 18, wherein said optoelectronic receiving unit is embodied as smaller in surface area than said optoelectronic transmitting unit.

Claim 25 (canceled)

26. (previously presented) The radiation transmission system of claim 29, further comprising an optical radiation shaping element disposed between said thin membrane and said radiation- emitting region of said optoelectronic transmitting unit.

27. (previously presented) The radiation transmission system of claim 26, wherein said optical radiation shaping element comprises a lens with a focusing action.

28. (previously presented) The radiation transmission system of claim 26, wherein said optical radiation shaping element comprises an optical gel.

29. (previously presented) A radiation transmission system, comprising:
a waveguide that emits radiation out of an end face along an optical axis;
and

an optoelectronic transceiver that receives said radiation, said
optoelectronic transceiver comprising:

a substrate element comprising a first electrical conductor track
and a second electrical conductor track;

an optoelectronic transmitting unit disposed on a portion of said
substrate element and electrically connected to said first electrical conductor track, said
optoelectronic transmitting unit comprising:

a radiation-emitting layer region; and

an optoelectronic receiving unit electrically connected to said
second electrical conductor track and is disposed in bridge-like fashion above said

optoelectronic transmitting unit along a common optical axis via a spacer attached to said substrate so that said optoelectronic receiving unit is spaced from said substrate, said optoelectronic receiving unit comprising:

an active radiation-sensitive layer region disposed perpendicular to said optical axis and located in a thin membrane, which is disposed immediately in front of said radiation-emitting layer region of said optoelectronic transmitting unit.

30. (previously presented) The radiation transmission system of claim 29, wherein said radiation-sensitive area of said optoelectronic receiving unit is large when compared to said radiation-emitting portion of said end face of said optical waveguide.

31. (previously presented) The radiation transmission system of claim 29, wherein said active radiation-emitting layer region of said optoelectronic transmitting unit is disposed perpendicular to said optical axis.

32. (previously presented) The radiation transmission system of claim 29, wherein contacting of said optoelectronic transmitting unit is effected from a side that is oriented facing away from said optical waveguide.

33. (previously presented) The radiation transmission system of claim 29, wherein said substrate element has a recess, and said radiation-emitting region of said optoelectronic transmitting unit and at least a portion of said active layer region of said optoelectronic receiving unit are disposed in the region of said recess, and said optoelectronic transmitting unit and said optoelectronic receiving unit are disposed on two different sides of said substrate element.

34. (previously presented) The radiation transmission system of claim 29, wherein contacting of said receiving unit, disposed above said optoelectronic transmitting unit, is effected by contacting elements which are disposed on side faces of said optoelectronic transmitting unit.

35. (previously presented) The radiation transmission system of claim 34, wherein said optoelectronic receiving unit as well as said optoelectronic transmitting unit are embodied as approximately of equal size in terms of surface area.

Claims 36-37 (canceled)

38. (previously presented) The radiation transmission system of claim 29, wherein said end face of said optical waveguide is disposed in a recess of said optoelectronic receiving unit in which said thin membrane having said active layer region is also located, and said optoelectronic transmitting unit is disposed on a side of said optoelectronic receiving unit opposite from said optical waveguide.

39. (new) The optoelectronic transceiver of claim 18, wherein said substrate element is substantially planar along a plane that is substantially perpendicular to said optical axis.

40. (new) The radiation transmission system of claim 29, wherein said substrate element is substantially planar along a plane that is substantially perpendicular to said optical axis.